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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZHEN, LI B

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/788,768	Applicant(s) LILLEY ET AL.	
	Examiner LI B. ZHEN	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 24 are pending in the application.

Response to Arguments

2. Applicant's arguments with respect to the prior art have been considered but are moot in view of the new ground(s) of rejection.

In response to the 35 USC § 101 rejection in the Non-Final Office Action dated 03/20/2008, applicant argues an example of a service broker is shown as element 127 (a “service broker server”) in Fig. 1 of the Application. There is nothing in the ordinary meaning of the term “service broker” that makes it inherently software (p. 10 of response submitted on 7/17/2008). Examiner respectfully disagrees and submits that dependent claim 3 specifically identifies the service broker as a software component. Therefore, the system as recited in claims 1 and 16 includes a service broker that is a software component. A software component is a computer program that is merely a set of instructions capable of being executed by a computer. Without the computer-readable medium needed to realize the computer program’s functionality, the software component is nonstatutory functional descriptive material. See MPEP § 2106.01 (i). The systems recited in claims 1 and 16 do not include any computer-readable medium or computer hardware; therefore, the system claims are directed to nonstatutory functional descriptive material only.

Oath/Declaration

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3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be “material to patentability as defined in 37 CFR 1.56.”

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 – 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites a system comprising of a service broker and claim 16 recites a system comprising of service broker, service providers and client-side component. The service broker, service providers and client-side component are interpreted as software only and are functional descriptive material. However, function descriptive material is nonstatutory when claimed as descriptive material per se. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Since claims 1 and 16 do not recite the service broker, service providers and client-side component as being recorded on a computer-readable medium, the system are interpreted as

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comprising functional descriptive material per se and non statutory. See MPEP § 2106.01.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0084138 to Tavis et al. [hereinafter Tavis] in view of U.S. Patent No. 6,202,207 to Donohue.**

8. As to claim 1, Tavis teaches a system that facilitates interactions between one of a plurality of software components [components; p. 2, paragraph 0031] in an electronic device [p. 2, paragraph 0032] and an associated one of a plurality of servers, via a network [p. 2, paragraph 0029], the system comprising:

a service broker [a system component manager 116, operates in the master process 100 and is forwarded all component update requests; paragraph 0033] capable of receiving at least one request for service associated with one of the plurality of software components [Every component update requests begins when some object calls the component with a component URL; paragraphs 0086 and 0047];

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the service broker capable of determining the one of the plurality of servers associated with the one of the plurality of software components [system component manager 116 can cause a download of a component file from the location from which the component was originally retrieved and check to determine whether the component file references a newer component; p. 4, paragraph 0048]; and

the service broker capable of forwarding the at least one request for service to the determined one of the plurality of servers [download manager 130 retrieves components designated by the system component manager 116 from a server over a network, such as the Internet; p. 3, paragraph 0034 and p. 6, paragraph 0076]. Tavis does not teach determining the one of the plurality of servers associated with the one of the plurality of software components based upon a prior registration associating the one of the plurality of servers with the one of the plurality of software components making the at least one request for service.

However, Donohue teaches a service broker capable of determining the one of the plurality of servers associated with the one of the plurality of software components [CORBA (Common Object Request Broker Architecture) ORB (Object Request Broker) is used for location of and communication between two updater components; col. 16, lines 46 – 60], based upon a prior registration [component updater registration database 40; col. 16, lines 46 – 60] associating the one of the plurality of servers with the one of the plurality of software components making the at least one request for service [col. 16, lines 6 – 40; col. 9, line 45 – col. 10, line 3]; and the service broker capable of

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forwarding the at least one request for service to the determined one of the plurality of servers [col. 12, lines 47 – 63 and col. 20, lines 45 – 56].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Tavis to incorporate the features of Donohue. One of ordinary skill in the art would have been motivated to make the combination because this provides the flexibility to automatically deal with any depth of inter-dependency in the relationship between pre-requisite products [col. 6, lines 18 – 29 of Donohue]. This also provides an agent and a method for synchronising software updates which significantly reduces the cost and effort for software distributors of distributing and tracking software updates and significantly reduces the effort for system administrators and end users of applying updates to installed software [col. 6, lines 18 – 32 of Donohue].

9. As to claim 16, Tavis as modified teaches a wireless communication system supporting at least one electronic device [paragraph 0124 of Tavis], the system comprising:

a service broker communicatively coupled to the at least one electronic device [paragraphs 0033, 0047 and 0086 of Tavis and col. 16, lines 46 – 60 of Donohue];

a plurality of service providers, each of the plurality of service providers communicatively coupled to the service broker [component farms which are commodity servers that host components available for download by the component manager; p. 6, paragraph 0076 of Tavis];

a client-side component in the at least one electronic device that requests a software update from one of the plurality of service providers [local component manager, such as component manager 110 or 112, can determine if a component update request will result in a component download; pp. 2 – 3, paragraph 0033 of Tavis]; and

wherein the service broker determines the appropriate one of the plurality of service providers to respond to the software update request [system component manager 116 can cause a download of a component file from the location from which the component was originally retrieved and check to determine whether the component file references a newer component; p. 4, paragraph 0048 of Tavis], based upon an association of the one of the plurality of service providers with the client-side component that made the request [col. 16, lines 6 – 60; col. 9, line 45 – col. 10, line 3 of Donohue].

10. As to claim 22, Tavis as modified teaches a method for updating at least one of a software component [components; p. 2, paragraph 0031 of Tavis] and software component configuration information in an electronic device [p. 2, paragraph 0032 of Tavis] communicatively coupled to a service broker [pp. 2 – 3, paragraph 0033 of Tavis and col. 16, lines 46 – 60 of Donohue], the method comprising:

under the control of the electronic device, registering at least one call-back function available in the software component [col. 7, line 54 – col. 8, line 10 of Donohue], wherein each of the at least one call-back function is associated with a

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server [download operation is asynchronous with the operation of the system component manager; p. 6, paragraph 0073 of Tavis];

communicating, to the service broker, a request for updating of at least one of the software component and software component configuration [paragraphs 0086 and 0047 of Tavis and col. 16, lines 6 – 40; col. 9, line 45 – col. 10, line 3 of Donohue];

receiving results from a remote service provider [receives a "component update delta"; p. 4, paragraph 0046 of Tavis]; and

invoking the at least one call-back function using the received results [p. 10, paragraph 0122 of Tavis]; and

under the control of the service broker, receiving an update request [system component manager 116 also handles tasks, such as polling for new versions of installed components on time-driven events associated with the installed components; pp. 2 – 3, paragraph 0033 of Tavis];

determining a service provider based upon the update request [system component manager 116 can cause a download of a component file from the location from which the component was originally retrieved and check to determine whether the component file references a newer component; p. 4, paragraph 0048 of Tavis];

invoking update functionality on the determined service provider [col. 7, line 54 – col. 8, line 10 of Donohue]; and

transmitting results of the invoked update functionality to the mobile device [download manager 130 retrieves components designated by the system component

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manager 116 from a server over a network, such as the Internet; p. 3, paragraph 0034 and p. 6, paragraph 0076 of Tavis].

11. As to claim 2, Tavis as modified teaches the service broker capable of selectively communicating a response from the determined one of the plurality of servers to the one of the plurality of software components in the electronic device [p. 5, paragraph 0063 of Tavis].

12. As to claim 3, Tavis as modified teaches the service broker is a software component in the electronic device [p. 4, paragraph 0048 of Tavis].

13. As to claim 4, Tavis as modified teaches the one of the plurality of servers comprises a download server capable of receiving a request for an update package, the download server capable of sending the requested update package to the one of the plurality of software components in the electronic device [p. 4, paragraph 0048 of Tavis].

14. As to claim 5, Tavis as modified teaches the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component [p. 3, paragraph 0040 of Tavis].

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15. As to claim 6, Tavis as modified teaches the service broker forwards the update package to at least one of the plurality of software components in the electronic device [p. 4, paragraph 0048 of Tavis].

16. As to claim 7, Tavis as modified teaches the one of the plurality of software applications in the electronic device comprises an update agent capable of processing an update package, the update agent capable of being invoked by the service broker when an update package is communicated to the electronic device [p. 3, paragraph 0040 of Tavis].

17. As to claim 8, Tavis as modified teaches the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component [p. 3, paragraph 0040 of Tavis].

18. As to claim 9, Tavis as modified teaches the at least one request for service comprises an asynchronous request [p. 4, paragraph 0046 of Tavis]; and the service broker is capable of communicating a response received from the one of the plurality of servers back to the one of the plurality of software components [p. 4, paragraph 0048 of Tavis].

19. As to claim 10, Tavis as modified teaches the at least one request for service comprises an asynchronous request [p. 4, paragraph 0046 of Tavis]; the one of the

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plurality of software components registers callback information with the service broker [col. 16, lines 46 – 60 of Donohue]; and the service broker communicates a response received from the one of the plurality of servers back to the one of the plurality of software applications based upon the registered callback information [p. 4, paragraph 0048 of Tavis].

20. As to claim 11, Tavis as modified teaches the service broker is a server communicatively coupled to the electronic device [p. 4, paragraph 0050 of Tavis].

21. As to claim 12, Tavis as modified teaches the service broker server determines which one of the plurality of servers is available and capable of processing the at least one service request, and subsequently forwards the request to the determined one of the plurality of servers [p. 4, paragraph 0048 of Tavis].

22. As to claim 13, Tavis as modified teaches the determined one of the plurality of servers is forwarded the at least one service request for processing, and a response from the determined one of the plurality of servers is forwarded to the one of the plurality of software components [p. 5, paragraph 0063 of Tavis].

23. As to claim 14, Tavis as modified teaches processes the at least one service request, the at least one service request comprising a request for a software update from the one of the plurality of software components, retrieves an update package and

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associated information [col. 10, lines 39 – 59 of Donohue], and communicates the update package and associated information to the electronic device [paragraph 0034 and p. 6, paragraph 0076 of Tavis].

24. As to claim 15, Tavis as modified teaches the plurality of software components comprises a download agent and an update agent; the download agent is capable of requesting a software update from the service broker server, and receiving in response an update package from the service broker server [p. 4, paragraph 0048 of Tavis]; and the update agent is capable of processing the received update package for updating at least one of firmware and software in the electronic device [col. 10, lines 39 – 59 of Donohue].

25. As to claim 17, Tavis as modified teaches a generic intelligent responsive agent in the electronic device, the generic intelligent responsive agent communicatively coupled to the service broker [p. 3, paragraph 0040 of Tavis]; the generic intelligent responsive agent capable of establishing a communication link with the service broker server [p. 9, paragraph 0118 of Tavis]; the generic intelligent responsive agent capable of forwarding the software update request and associated information from the client-side component to the service broker server [p. 4, paragraph 0048 of Tavis]; and the service broker server determining the one of the plurality of service providers as a target server capable of processing the software update request and forwarding the software

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update request to the target server [col. 16, lines 46 – 60 of Donohue and p. 5, paragraph 0063 of Tavis].

26. As to claim 18, Tavis as modified teaches the target server: processes the received software update request [p. 4, paragraph 0048 of Tavis]; retrieves an appropriate update package and associated information [col. 10, lines 39 – 59 of Donohue]; and communicates the appropriate update package and associated information back to the generic intelligent responsive agent for subsequent communication to the associated client-side component [paragraph 0034 and p. 6, paragraph 0076 of Tavis].

27. As to claim 19, Tavis as modified teaches the generic intelligent responsive agent: acts as a proxy for the client-side component [p. 4, paragraph 0048 of Tavis]; and provides one of asynchronous communication [p. 4, paragraph 0046 of Tavis] and synchronous communication facilities for interactions with the target server [p. 4, paragraph 0047 of Tavis].

28. As to claim 20, Tavis as modified teaches the electronic device comprises: a registration client capable of maintaining a plurality of registration entries, each registration entry associated with a client-side software component, each entry comprising at least one of a name, a version [col. 10, lines 16 – 39 of Donohue], a plurality of dependencies [col. 14, lines 43 – 60 of Donohue], a status that specifies

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current operational status, a plurality of callback functions, an associated parameter [col. 13, lines 45 – col. 14, line 20 of Donohue], an event, and a return type; a set of configuration parameters [col. 13, lines 45 – col. 14, line 20 of Donohue]; a client-side software component specific update agent capable of updating at least one of the set of configuration parameters and the client-side software component [pp. 2 – 3, paragraph 0033 of Tavis]; and a server URL that specifies a service provider and associated relevant information [p. 5, paragraph 0056 of Tavis].

29. As to claim 21, Tavis as modified teaches the electronic device comprises security information [pp. 6 – 7, paragraph 0079 of Tavis].

30. As to claim 23, Tavis as modified teaches under the control of the electronic device, communicating the received results to an update agent capable of updating the at least one of the software component and software component configuration [pp. 2 – 3, paragraph 0033 of Tavis].

31. As to claim 24, Tavis as modified teaches under the control of the electronic device, communicating a request by the software component to a generic intelligent responsive agent, the request comprising a command to be invoked on the remote service provider and parameters to be passed to it [p. 3, paragraph 0040 of Tavis]; communicating the request to the service broker [p. 9, paragraph 0118 of Tavis]; and communicating the received results to the software component [p. 5, paragraph 0063 of

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Tavis], under the control of the service broker, receiving the command request [pp. 2 – 3, paragraph 0033 of Tavis]; determining a service provider based upon the update request [pp. 2 – 3, paragraph 0033 of Tavis]; invoking update functionality on the determined service provider [col. 16, lines 6 – 27 of Donohue]; and transmitting results of the invoked update functionality to the generic intelligent responsive agent [p. 3, paragraph 0034 and p. 6, paragraph 0076 of Tavis].

CONTACT INFORMATION

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/
Primary Examiner, Art Unit 2194

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